

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-42 (canceled)

Claim 43 (currently amended): A tested semiconductor device produced by a process comprising the steps of:

- providing a wafer having a plurality of semiconductor devices thereon, each of said semiconductor devices including a plurality of electrical contact terminals;
- providing a probe card assembly, said probe card assembly ~~including~~ comprising:
 - a probe card having a plurality of electrical contacts,
 - a probe substrate having a plurality of probe elements, and
 - an interposer disposed between said probe card and said probe substrate, said interposer ~~allowing relative movement between said probe card and said probe substrate while maintaining electrical connections between ones of said electrical contacts and ones of said probe elements~~ including a plurality of compliant interconnection elements extending from opposite sides of said interposer and providing compliant electrical connections through said interposer between ones of said electrical contacts of said probe card and ones of said probe elements, and
 - a moveable element disposed to alter an orientation of said probe substrate with respect to said probe card;
- contacting said wafer and said probe card assembly such that ones of said electrical contact terminals of said semiconductor devices are in electrical contact with ones of said probe elements; and
- testing said semiconductor devices.

Claims 44-47 (canceled)

Claim 48 (previously presented): The tested semiconductor device of claim 43, wherein the process further comprises dicing said wafer to singulate said semiconductor devices.

Claim 49 (previously presented): The tested semiconductor device of claim 43, wherein said probe substrate comprises a space transformer.

Claim 50 (canceled):

Claim 51 (currently amended): The tested semiconductor device of ~~claim 50~~ claim 43, wherein said moveable element comprises a threaded element.

Claim 52 (currently amended): The tested semiconductor device of ~~claim 50~~ claim 43, wherein said moveable element comprises a screw.

Claim 53 (previously presented): The tested semiconductor device of claim 52, wherein said screw comprises a differential screw.

Claim 54 (currently amended): The tested semiconductor device of ~~claim 50~~ claim 43, wherein moving said moveable element in a first direction causes at least a portion of said probe substrate to move toward said probe card.

Claim 55 (previously presented): The tested semiconductor device of claim 54, wherein moving said moveable element in a second direction allows at least a portion of said probe substrate to move away from said probe card.

Claim 56 (currently amended): The tested semiconductor device of ~~claim 50~~ claim 43, wherein said ~~altering~~ moveable element comprises ~~actuating~~ a servo mechanism disposed to alter a position of said probe substrate with respect to said probe card.

Claim 57 (currently amended): The tested semiconductor device of ~~claim 50~~ claim 43, wherein said ~~altering~~ moveable element comprises ~~actuating~~ a piezoelectric actuator disposed to alter a position of said probe substrate with respect to said probe card.

Claim 58 (canceled)

Claim 59 (previously presented): The tested semiconductor device of claim 43, wherein said probe elements are elongate and resilient.

Claim 60 (currently amended): The tested semiconductor device of claim 44, wherein said ~~step of aligning tips of said probe elements further comprises~~ moveable element is capable of planarizing said tips with respect to said electrical contact terminals of said semiconductor device.

Claim 61 (currently amended): The tested semiconductor device of ~~claim 46~~ claim 43, wherein said moveable element comprises a pivot structure.

Claim 62 (previously presented): The tested semiconductor device of claim 61, wherein said pivot structure is disposed against said probe substrate.

Claim 63 (currently amended): The tested semiconductor ~~claim 46~~ claim 43, wherein said moveable element comprises a sphere.

Claim 64 (currently amended): The tested semiconductor device of ~~claim 46~~ claim 43, wherein said moveable element comprises a differential screw that comprises an outer threaded portion and an inner threaded portion.

Claim 65 (currently amended): The tested semiconductor device of ~~claim 50~~ claim 43, wherein said probe substrate is mounted to said probe card by a means that is different than said moveable element.

Claims 66 and 67 (canceled)

Claim 68 (currently amended): The tested semiconductor device of ~~claim 67~~ claim 60, wherein
said ~~step of aligning tips of said probe elements further comprises~~ moveable element is further
capable of planarizing said tips with respect to said semiconductor device.

Claims 69-73 (canceled)

Claim 74 (currently amended): The tested semiconductor device of ~~claim 50~~ claim 43 wherein:
said probe substrate is mounted to said probe card with a biasing force, and
said moveable element is configured to apply a force in opposition to said biasing force.

Claim 75 (new): The tested semiconductor device of claim 43, wherein:
said interposer comprises a substrate and a plurality of conductive vias passing through
said substrate, and
one elongate interconnection element in each of said pairs of elongate interconnection
elements is electrically connected to one end of one of said vias and said other elongate
interconnection element in each of said pairs of elongate interconnection elements is electrically
connected to an opposite end of said one of said vias.

Claim 76 (new): The tested semiconductor device of claim 75, wherein:
said interposer further comprises a plurality of first terminals disposed on a first side of
said interposer and a plurality of second terminals disposed on a second side of said interposer,
~~ones of said vias electrically connect ones of said first terminals with ones of said second~~
terminals, and
said one elongate interconnection element in each of said pairs of elongate
interconnection elements is attached to one of said first terminals and said other elongate
interconnection element in each of said pairs of elongate interconnection elements is attached to
one of said second terminals.

Claim 77 (new): The tested semiconductor device of claim 43, further comprising a plurality of conductive passages through said probe substrate, and wherein:

ones of said probe elements are electrically connected to one end of ones of said conductive passages,

one elongate interconnection element in each of said pairs of elongate interconnection elements is in electrical contact with an opposite end of said ones of said conductive passages, and

said other elongate interconnection element in each of said pairs of elongate interconnection elements is in electrical contact with one of said electrical contacts of said probe card.

Claim 78 (new): The tested semiconductor device of claim 43 further comprising fastening means for moveably fastening said probe substrate to said probe card, wherein said interposer floatingly engages said probe card and said probe substrate without being fastened to said probe substrate or said probe card.

Claim 79 (new): The tested semiconductor device of claim 78, wherein only tips of said elongate interconnection elements of said interposer touch said probe card or said probe substrate.

Claim 80 (new): The tested semiconductor device of claim 43, wherein said step of contacting said wafer comprises bringing ones of said probe elements into contact with ones of said electrical contact terminals of said semiconductor devices.

Claim 81 (new): The tested semiconductor device of claim 43, wherein said moveable element is capable of altering a planar orientation of said probe substrate with respect to a planar orientation of said probe card.

Claim 82 (new): A tested semiconductor device produced by a process comprising the steps of:
providing a wafer having a plurality of semiconductor devices thereon, each of said semiconductor devices including a plurality of electrical contact terminals;
providing a probe card assembly, said probe card assembly comprising:
a probe card having a plurality of electrical contacts,
a probe substrate having a plurality of probe elements,
an interposer disposed between said probe card and said probe substrate, said interposer including a plurality of compliant elongate interconnection elements extending from opposite sides of said interposer and providing compliant electrical connections through said interposer between ones of said electrical contacts of said probe card and ones of said probe elements, and
means for altering an orientation of said probe substrate with respect to said probe card;
contacting said wafer and said probe card assembly such that ones of said electrical contact terminals of said semiconductor devices are in electrical contact with ones of said probe elements; and
testing said semiconductor devices.

Claim 83 (new): The tested semiconductor device of claim 82, wherein said means for altering alters a planar orientation of said probe substrate with respect to a planar orientation of said probe card.
